DOCUMENT RESUME

ED 041 848 24 SP 004 106

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TITLE	Do Boys and Girls Receive Equal Opportunity in First Grade Reading Instruction?
INSTITUTION	Texas Univ., Austin. Research and Development Center for Teacher Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-5-0249
PUB DATE	Sep 69
GRANT	OEC-6-10-108
NOTE	12p.; Report Series No. 24
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.70
DESCRIPTORS	Early Reading, Educational Environment, *Grade 1, Negative Attitudes, *Reading Instruction, Reading Level, *Sex Differences, *Student Opinion, *Teacher Attitudes

ABSTRACT

This research was carried out to discover why student perceive differential teacher treatment when behavioral data suggest that teachers provide the same learning environment for both sexes. The research was carried out in four first-grade classrooms in a small Texas school district; in each class three girls and three boys rated high in achievement by their teacher, and three girls and three boys rated low were observed. A special coded system was constructed to record differential teacher behaviors, the quality of the child's response, and the type of feedback provided by the teacher. Approximately 4 hours of reading instruction were observed in each classroom. The results showed that teachers extend equal treatment to boys and girls, with high-achievement students of both sexes receiving preferential treatment in some instances. However, boys did receive more teacher criticism over all areas of classroom life because of their more frequent disruptive behavior. Students' impressions were that boys received more negative comments from teachers during reading instruction, probably due to a generalized halo effect distorting their perception of what happens in the reading group. The fact that girls learn to read faster than boys cannot be traced to teacher behavior during reading groups, and the educational significance of this difference does not seem to be important. (MBM)

ED041848

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Report Series No. 24

September, 1969

The Research and Development Center for Teacher Education
The University of Texas at Austin

SP004106

The project reported herein was supported by USOE Grant No. 6-10-108, The Research and Development Center for Teacher Education, Dr. Robert F. Peck and Dr. Oliver H. Bown, directors.

DO BOYS AND GIRLS RECEIVE EQUAL OPPORTUNITY IN FIRST GRADE READING INSTRUCTION?

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The fact that girls learn to read faster than boys and have fewer reading problems than boys has been supported in a number of educational studies (Balow, 1963; Anderson, et al, 1957; Yedinack, 1949; Hughes, 1953; Gates, 1961; Aldan, et al, 1941). Although the phenomenon itself is well documented, the factors producing it are still unidentified.

Many investigators have contended that the demands of teachers and school call for behaviors that are better matched with feminine needs and characteristics (Ayers, 1909; St. John, 1932; Davidson and Lang, 1960; McNeil, 1964). These authors suggest that girls are maturationally or environmentally ready to assimilate first-grade activities to a greater extent than boys. The male exhibits a classroom behavior pattern that is alien to the behavior demanded by female first-grade teachers. Teachers then are forced to evoke classroom strategies to transform the male pupil so that he will accept the passive demands of school life.

If the first-grade teacher and her concomitant "female bias" is a variable accounting for significant variance in reading learning rates, then the "effect" of the teacher should be traceable to explicit differential behavior on the part of teachers during reading instruction.

Although many writers have posited differential teacher behavior that discriminates against the progress of the male learner, few investigations have gathered direct behavioral evidence to support this position. McNeil (1964) advanced the suggestion that an association existed between differential teacher behavior and student performance in beginning reading instruction. In kindergarten, McNeil had exposed children to programmed reading instruction and noted that male performance exceeded female reading achievement; however, after exposure to female teachers in the first grade the girls' reading superiority was noted. Hence McNeil inferred an association between teacher behavior and poor male performance in reading. To support his claims of teacher discrimination, McNeil cited pupil and teacher self-report data. Pupils' perceived inequality of male students was evident in their answers to such questions as, "To Whom is the teacher talking when she says, 'Read that page out loud for us'?"

Davis and Slobodian (1967) tested the McNeil hypothesis (teachers' behavior reduces the reading performance of males) by conducting an observational study in ten first-grade classrooms. They reported that teachers did not discriminate against male readers during reading instruction. For example, their data show that teachers did not call on girls more and boys less frequently and that teachers did not criticize boys more than girls during reading instruction. However, Davis and Slobodian also report that pupils' responses to interview questions demonstrated that pupils <u>perceived</u> both differential teacher treatment (boys receive more negative teacher comment) and differential achievement (boys read more poorly than girls).

Why do students perceive differential teacher treatment when behavioral data suggest that teachers provide the same learning environment for both sexes? Perhaps the dependent measures that Davis and Slobodian employed in their observation system were not sensitive to the subtle processes through which teachers exert differential influence on male and female readers. These questions are dealt with in the present study.

METHOD

The research was carried out in four first-grade classrooms in a small Texas school district serving a rural, primarily lower-class population. However, a large military base within the district contributes about 45 per cent of the school population. Base children, for the most part, represent a higher socio-economic status and a more urban population than the local children. The ethnic composition of the school is about 10 per cent Afro-American, 15 per cent Mexican-American and 75 per cent Anglo-American.

Data were collected in four of nine first-grade classrooms. Study classrooms were chosen because there were no assistant teachers present to complicate the examination of teacher interaction with individual students. Participating teachers ranked their pupils in order of achievement. Ranking instructions were kept vague to encourage the teachers to use complex, subjective criteria in making their judgments. Thus, the rankings represented the teachers' estimate of and expectation for student achievement. In each class, three girls and three boys high on the teacher's list (highs), and three girls and three boys low on the list (lows) were selected for observational study. Highs were the first six eligible pupils on the list. Lows generally were the six lowest eligible pupils on the lists; however, a few children were excluded from the study because they could not speak English fluently or because of suspected emotional or biological disturbances.

Teachers were told that the study was to examine the classroom behavior of children from various achievement levels. They did not know that their own behavior was being coded or that certain children were targeted for special observation. The chances of discovering differential teacher treatment by achievement level were maximized by selecting subjects from the extremes of distributions of teachers' rankings. However, the school practiced tracking, attempting to achieve homogeneity within the nine classrooms by grouping the children according to readiness and achievement scores so that the spread from "best reader" to "poorest reader" was somewhat more restricted than in heterogeneous classrooms.

OBSERVATIONAL SYSTEM

A special system was constructed to record differential teacher behaviors during reading instruction (another coding system was employed to investigate differential teacher treatment in non-reading classroom activities). One major and consistent feature of the reading observation system was that the source of the interaction was always coded, so that it could be determined later whether the interaction was initiated by the teacher or the child. Interaction coded as teacher-afforded response opportunities included reading turns in the reading groups and answers to teacher questions which were asked during reading instruction. Some of the latter were child initiated, as when children called out answers without prior recognition or permission to respond from the teacher.

Beyond coding student response opportunities separately by type (reading turn, teacher-afforded response opportunity, child-initiated response opportunity), coders noted the quality of the child's response (correct, incomplete or partially correct, incorrect or no response) and the type of feedback provided by the teacher (praise, criticism, supplying the answer, repeating the question, rephrasing the question or giving a clue, or giving no feedback at all). Sequential recording of events made possible analysis not only of the absolute differences in teacher feedback to different groups but also of the relative differences that remain when group reading performance is taken into account.

After several pilot applications in which the system was perfected and inter-coder reliability was established, observations were made on four separate days in each of the four classes. To equalize the time spent in each classroom and to insure that the full range of classroom activities was included, the observation period extended for an entire morning or an entire afternoon (two of each for each class). Thus approximately four hours of reading instruction were viewed in each classroom. Each observer's assignments were balanced between the high and low groups to eliminate the possibility that obtained differences could be attributable to observer differences.

RESULTS

The data describing teacher behavior during reading instruction are presented in Table 1. Represented are the mean values for the four classes, two sexes, and two achievement groups and the p-values for group effects in class by sex by achievement analysis of variance. The results in Table 1 indicate that teachers extend equal treatment to boys and girls during reading instruction. The data do show differential teacher treatment by student achievement level, with high achievement students (both male and female) receiving preferential teacher behavior in some instances.[1]

NON-READING FINDINGS

Limited sex effects do appear when data from all aspects of classroom life are considered. For example, in total classroom activities boys produced more correct answers and received more criticism than girls. A sex x achievement level interaction is particularly noteworthy. Boys in the low group received teacher criticism in 33 per cent of their dyadic contacts with the teacher. The corresponding figure for the high boys is 13 per cent, for the low girls 16 per cent and for the high girls eight per cent. However, these sex differences are attributable to objective differences in the classroom behavior of the children rather than to discrimination against boys by the teachers. The difference appears attributable to the more frequent disruptive behavior among boys which brings criticism upon themselves rather than to a consistent teacher set or bias of being more critical toward boys than girls in equivalent situations.

ACHIEVEMENT FINDINGS

Behavioral observation measures were collected in late March and throughout April. The Stanford Achievement Test was administered to all four classes in early May. The total scores on the Stanford

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[1]These findings, along with other evidence reflecting differential teacher treatment of high and low achievement students are reported in Brophy and Good (1969).

Achievement Test for the sample children (24 highs and 24 lows) show the girls with a higher average grade-equivalent score, 1.66 to 1.58, although this sex difference is not significant. The findings for all children are presented in Table 2. Table 2 reveals that female mean score was higher on every subtest but significant sex differences are found only on word reading and paragraph meaning scales. Analysis of variance tests reflected a significant class effect on each of the six subtests (the classes were homogeneously grouped) but there were no significant class x sex interactions. Hence the achievement data show small differences favoring girls, as expected.

DISCUSSION

These data strongly suggest that boys and girls received equal treatment during reading instruction and they extend the external validity of the Davis and Slobodian (1967) study. Earlier studies (McNeil, 1964; Davis and Slobodian, 1967) reported that children perceived males as receiving inferior teacher treatment during reading instruction. The latter study presented data which showed equal teacher treatment, but with students still reporting the boys received more negative comments from teachers during reading instruction.

The gap between pupil perception and reality is understandable within the context of the data reported here. Although boys and girls were shown to receive equal treatment during reading instruction, it was found that boys did receive more teacher criticism when the teacher-child interactions from all areas of classroom life are analyzed. When children are asked to give self report data about classroom proceedings, a generalized halo effect probably distorts their perception of what happens in reading groups. Discrimination between behavior in reading groups and behavior in other classroom events and non-classroom activities is probably an impossible task for the child. He reports, accurately, what he sees: boys receive more negative teacher feedback (although, as mentioned previously, this fact is attributable to sex differences in classroom behavior and not to discriminatory teacher behavior).

The fact that girls learn to read faster than boys cannot be traced to teacher behavior during reading groups. In any case, the educational significance of these differences does not appear to be exceedingly important -- boys for the most part suffer no harm from the initial gap and eventually catch up. Maccoby aptly summarizes the sex differences in early verbal intellectual functioning: "Through the preschool years and in the early school years, girls exceed boys in most aspects of verbal performance. They say their first words sooner; articulate more clearly and at an earlier age, use longer sentences, and are more fluent. By the beginning of school, however, there are no longer any consistent differences in vocabulary. Girls learn to read sooner, and there are more boys than girls who require special training in remedial reading programs; but by approximately the age of ten, a number of studies show that boys have caught up in their reading skills. Throughout the school years, girls do better on test of grammar, spelling, and word fluency. (26)"

Investigations of teacher behavior as a determinant of differential reading performance might profit by a shift in research focus to pre-instructional teacher activities. Perhaps in their presentation of reading as a desirable skill or in their choice of books to read to children (or have the children read themselves), teachers may be inadvertently causing the subject to be perceived as less relevant by boys than by girls. Parental influence on child reading behavior might also be investigated to see if parents differentially encourage beginning reading efforts by boys and girls.

The interview method might also yield new information on the topic, although not by continuing to ask about matters of behavioral fact (reading opportunities, teacher evaluative responses) which can be more directly studied through behavioral observation. Information about young children's perceptions of reading as a skill and their interest in it as an activity would be particularly revealing. Do boys perceive reading as less desirable or interesting than girls? If so, does this difference exist before they start school or is it

fostered there? Information of this sort might help explain the persistent superiority of girls in early reading despite the apparent lack of sex differences in aptitude or opportunity.

TABLE 1. Teacher Behavior in Reading Activities

Variable	Group Means and p-values for group effects										
	Class				p	Sex		p	Achievement		p
	1	2	3	4		Boys	Girls		Lows	Highs	
Number of reading turns	5.42	0.75	2.08	2.01	.001	2.33	2.83	N.S.	2.63	2.54	N.S.
Number of teacher-afforded response opportunities	4.50	2.58	3.75	5.33	N.S.	4.63	3.46	N.S.	4.79	3.29	N.S.
Number of child created response opportunities	8.08	1.58	2.83	0.50	.001	3.58	2.92	N.S.	2.96	3.54	N.S.
Sum of teacher-afforded and child created opportunities	12.58	4.17	6.58	5.83	.002	8.21	6.38	N.S.	7.75	6.83	N.S.
Total reading problems	16.75	1.29	11.75	6.83	.001	9.86	10.29	N.S.	15.25	5.57	.001
Average number of reading problems per turn	3.00	1.14	6.03	3.39	.003	3.82	3.48	N.S.	5.20	2.30	.002
Percent of reading problems followed by teacher rephrases or clue	68.75	37.50	21.73	24.73	.001	36.25	42.28	N.S.	28.95	49.26	.05
Percent of reading problems followed by teacher repeating question	6.42	8.25	17.00	20.00	N.S.	15.85	11.11	N.S.	9.47	17.74	N.S.
Percent of reading problems followed by repetitions or rephrasing of the question or by giving a clue	75.08	45.75	38.91	44.64	.03	52.10	53.39	N.S.	38.37	67.05	.005

TABLE 2. Sex Differences in Grade-Equivalent Scores for Performance on the Stanford Achievement Test

	Female X	Male X	P
Word Reading	1.58	1.48	.10
Paragraph Meaning	1.60	1.48	.02
Vocabulary	1.86	1.77	N.S.
Spelling	1.49	1.43	N.S.
Work Study Skills	1.65	1.62	N.S.
Arithmetic	1.70	1.65	N.S.

REFERENCES

Aldan, C., Sullivan, H.B., and Durrell, D.D. The frequency of special reading disabilities. Education, 1941, 62, 32-36.

Anderson, I.H., Hughes, B.O., and Dixon, W.R. The rate of reading development and its relation to age of learning to read, sex, and intelligence. Journal of Educational Research, 1957, 50, 481-94.

Ayres, L.P. Laggards in our Schools. New York: Russell Sage Foundation, 1909.

Balow, I.H. Sex differences in first grade reading. Elementary English, 1963, 40, 303-6.

Brophy, J.E. and Good, T.L. Teachers' communication of differential expectations for children's classroom performance: some behavioral data. Submitted to Journal of Educational Psychology on August 22, 1969; copies available through the Report Series of the Research and Development Center for Teacher Education, The University of Texas, Austin, Texas 78712.

Davidson, H.H. and Lang, G. Children's perceptions of their teachers' feelings toward them related to self perception, school achievement, and behavior. Journal of Experimental Education, 1960, 29, 107-18.

Davis, O.L. Jr. and Slobodian, J.J. Teacher behavior toward boys and girls during first grade reading instruction. American Educational Research Journal, 1967, 4, 261-269.

Gates, A.I. Sex differences in reading ability. The Elementary School Journal, 1961, 61, 431-34.

Hughes, M.C. Sex differences in reading achievement in the elementary grades. Suppl. Educ. Monogr., 1953, No. 77, 102-6.

Maccoby, E.E. Sex differences in intellectual functioning. In E.E. Maccoby (Ed.) The Development of Sex Differences. Stanford: Stanford University Press, 1966.

McNeil, J.D. Programmed instruction versus usual classroom procedures in teaching boys to read. American Educational Research Journal, 1964, 1, 113-119.

St. John, C.W. The maladjustment of boys in certain elementary grades. Educational Administration and Supervision, 1932, 18, 659-72.

Yedinack, J.G. A study of the linguistic functioning of children with articulation and reading disabilities. Journal of Genetic Psychology, 1949, 74, 23-59.